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Guitard et al.

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(54) **MALE RJ45 CONNECTOR FOR RJ45 ELECTRICAL CONNECTION CORD**

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USPC 439/638, 731, 607.46, 607.38, 906, 465
See application file for complete search history.

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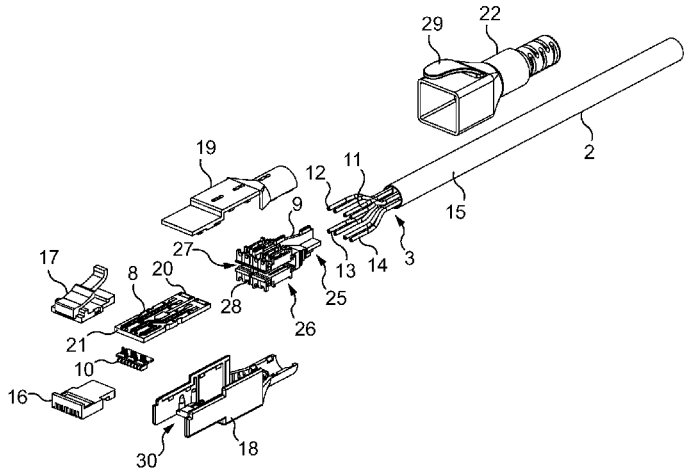
(57) **ABSTRACT**

A male RJ45 connector includes a printed circuit (**8**) having electrical tracks, at least one grounding plate sandwiched between faces (**23**, **24**) of the circuit and a slot extending longitudinally and opening on a side (**38**) of the circuit and being configured to pass through both the faces and the at least one grounding plate; and a spreader system (**9**) mounted on the circuit and including a separator body (**25**), an extension body (**26**) provided with a hollow (**27**) configured to receive the printed circuit and a central wall (**28**) dividing the hollow (**27**) into two parts and being configured to be inserted into the slot; the central wall and the at least one grounding plate being configured to be electrically interconnected and form an electrically and/or magnetically shielding barrier between pairs of conducting wires (**11-14**) mounted on the spreader and connected to the circuit.

20 Claims, 7 Drawing Sheets



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H01R 13/627	(2006.01)
H01R 24/78	(2011.01)
H01R 13/658	(2011.01)
H01R 13/6583	(2011.01)
H01R 12/58	(2011.01)
H01R 13/6581	(2011.01)
H01R 12/72	(2011.01)
H01R 12/50	(2011.01)
H01R 4/24	(2006.01)
H01R 13/6463	(2011.01)
H01R 24/28	(2011.01)
H01R 24/64	(2011.01)
H01R 31/06	(2006.01)
H05K 1/02	(2006.01)

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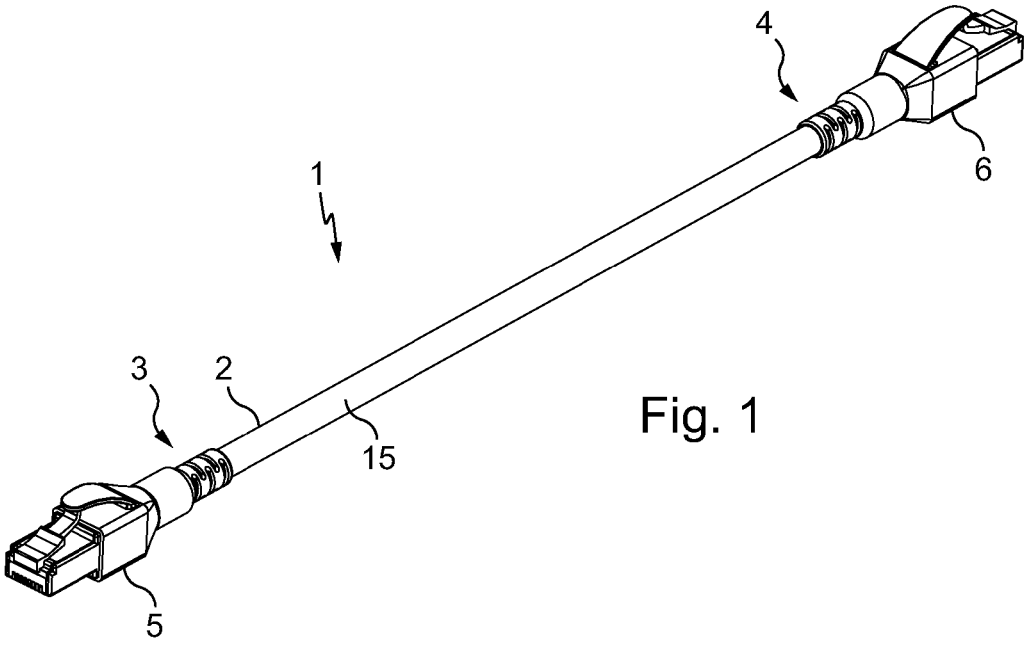
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Fig. 1

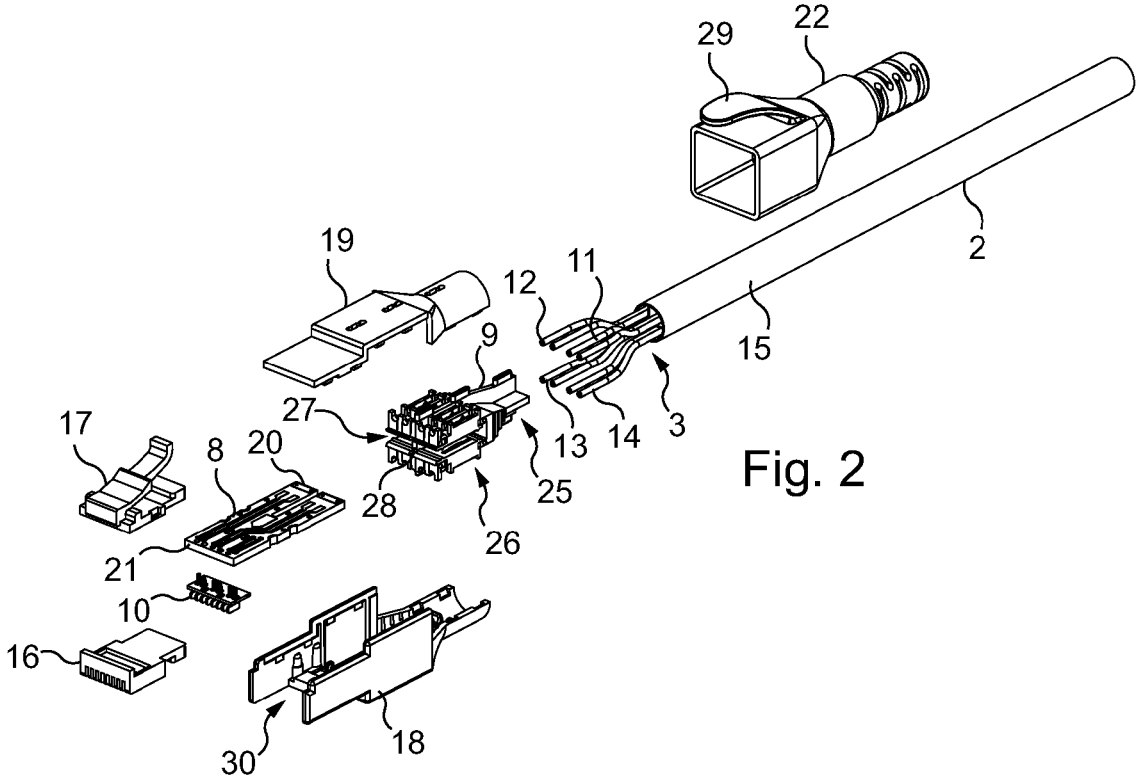
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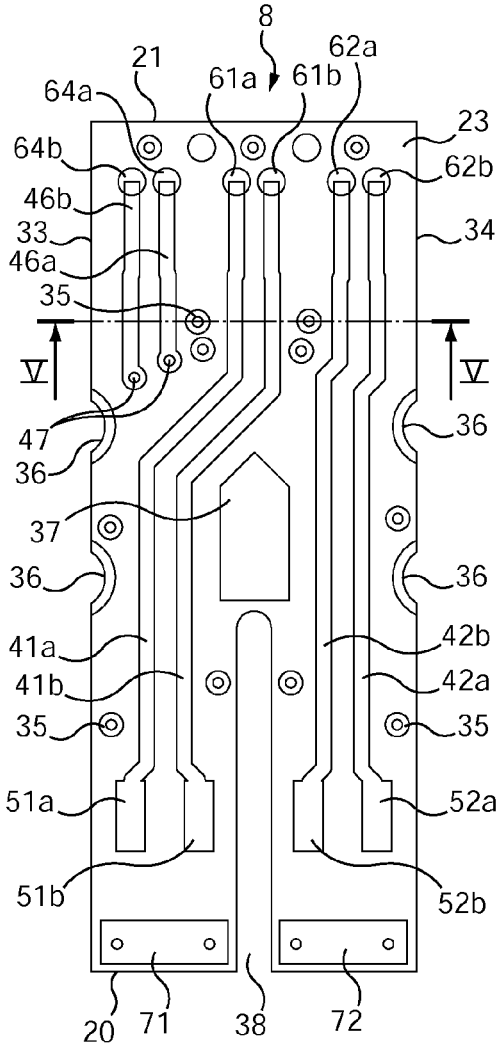
Fig. 2



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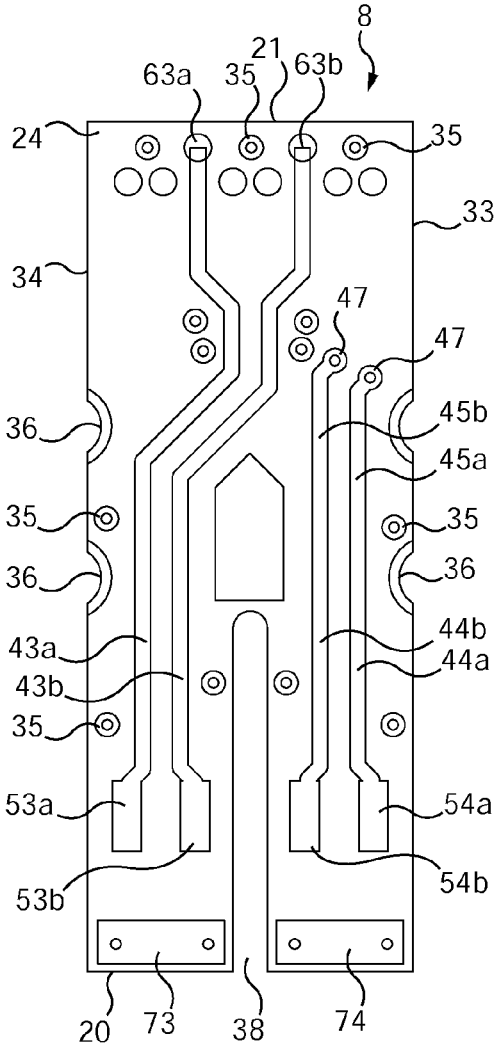

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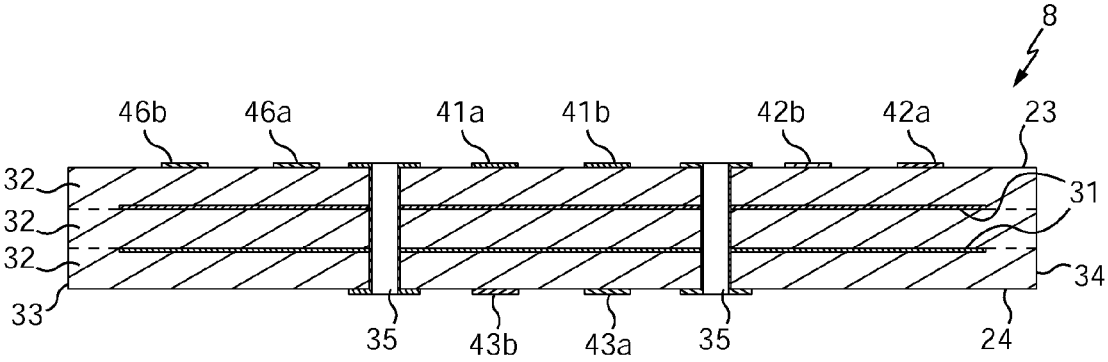

Fig. 5

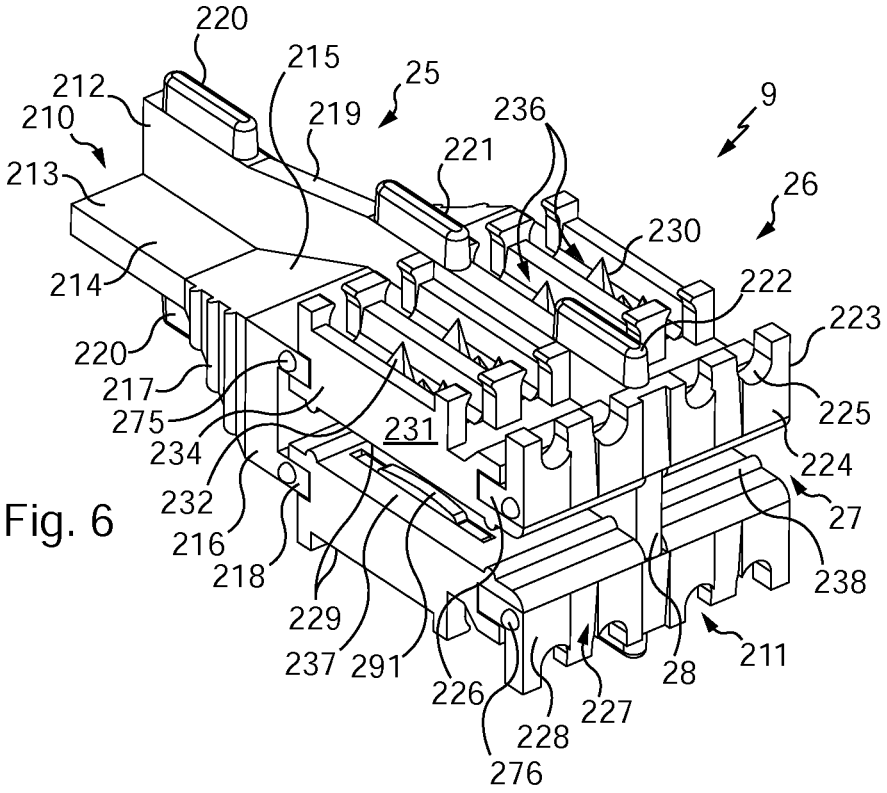
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Fig. 6

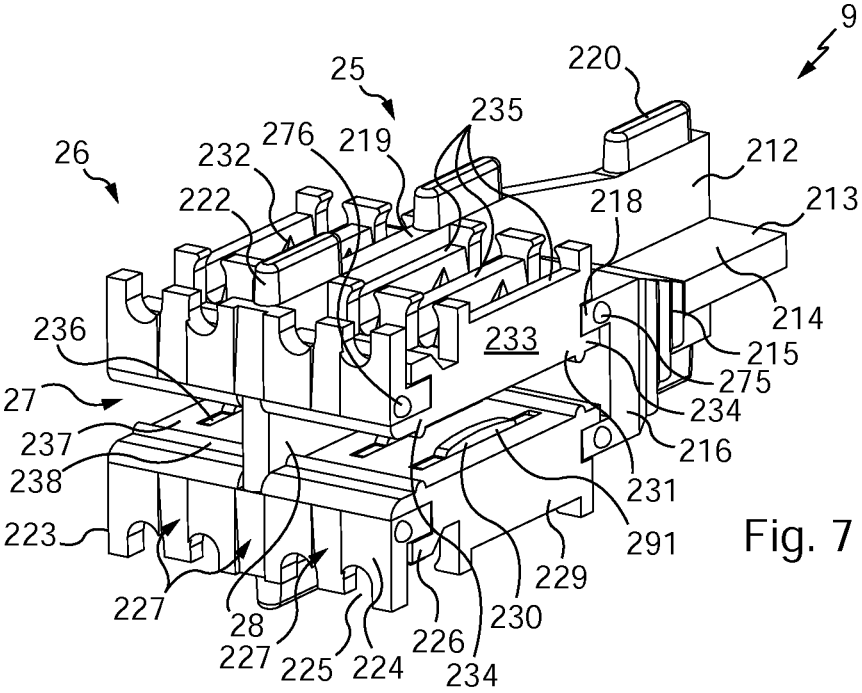
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Fig. 7

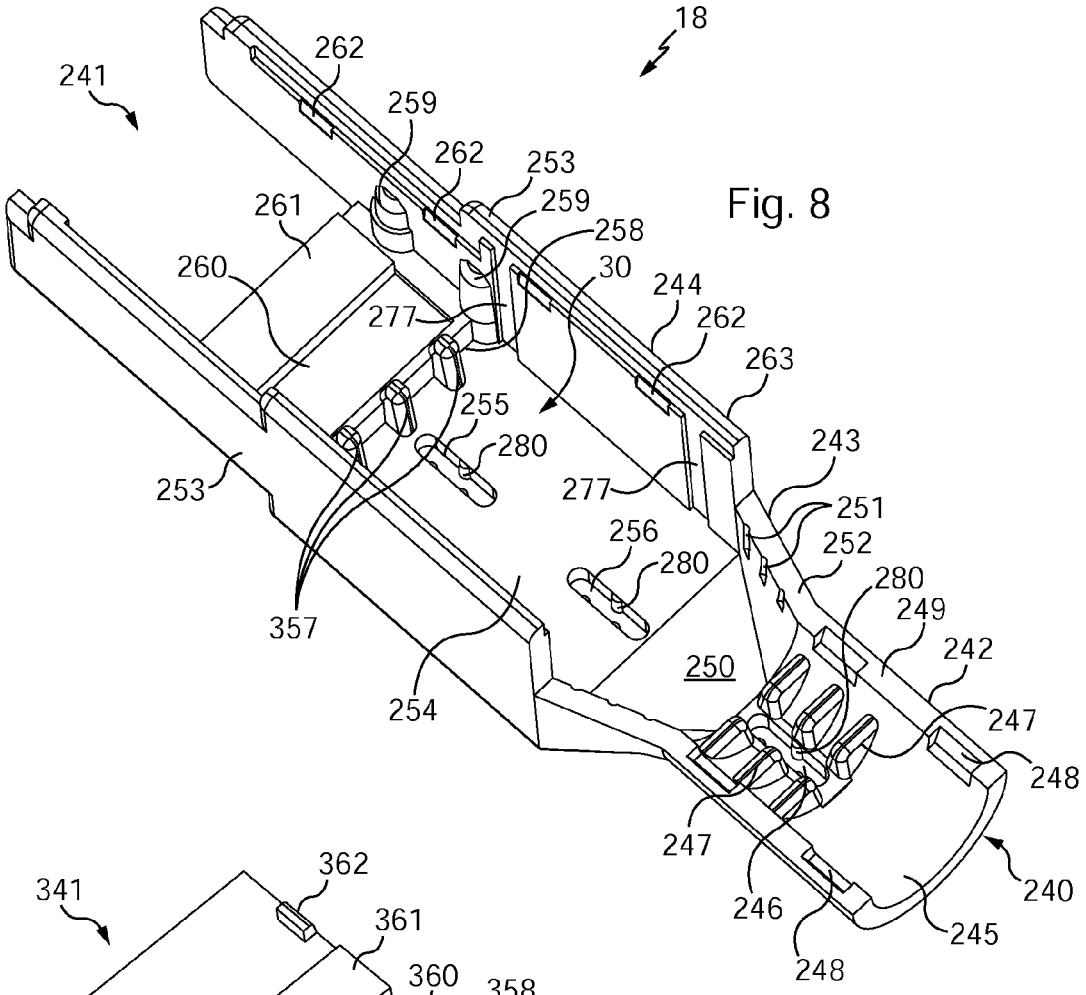
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Fig. 8

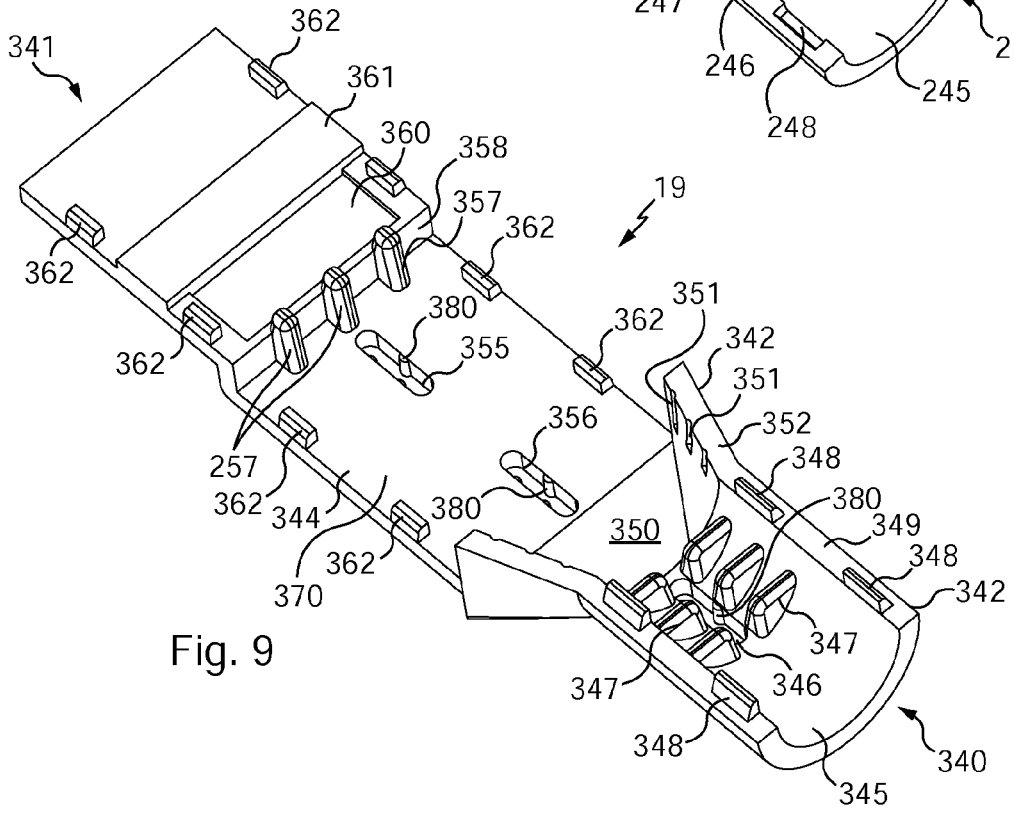
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Fig. 9

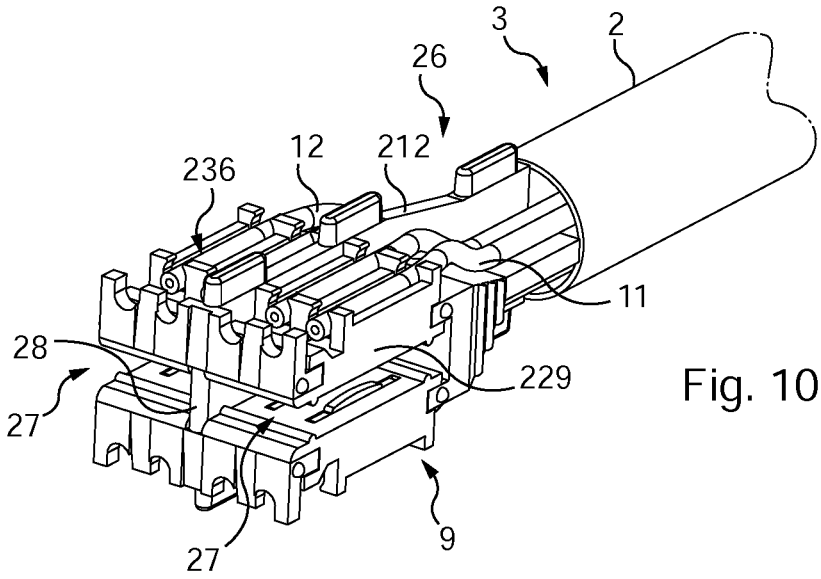
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Fig. 10

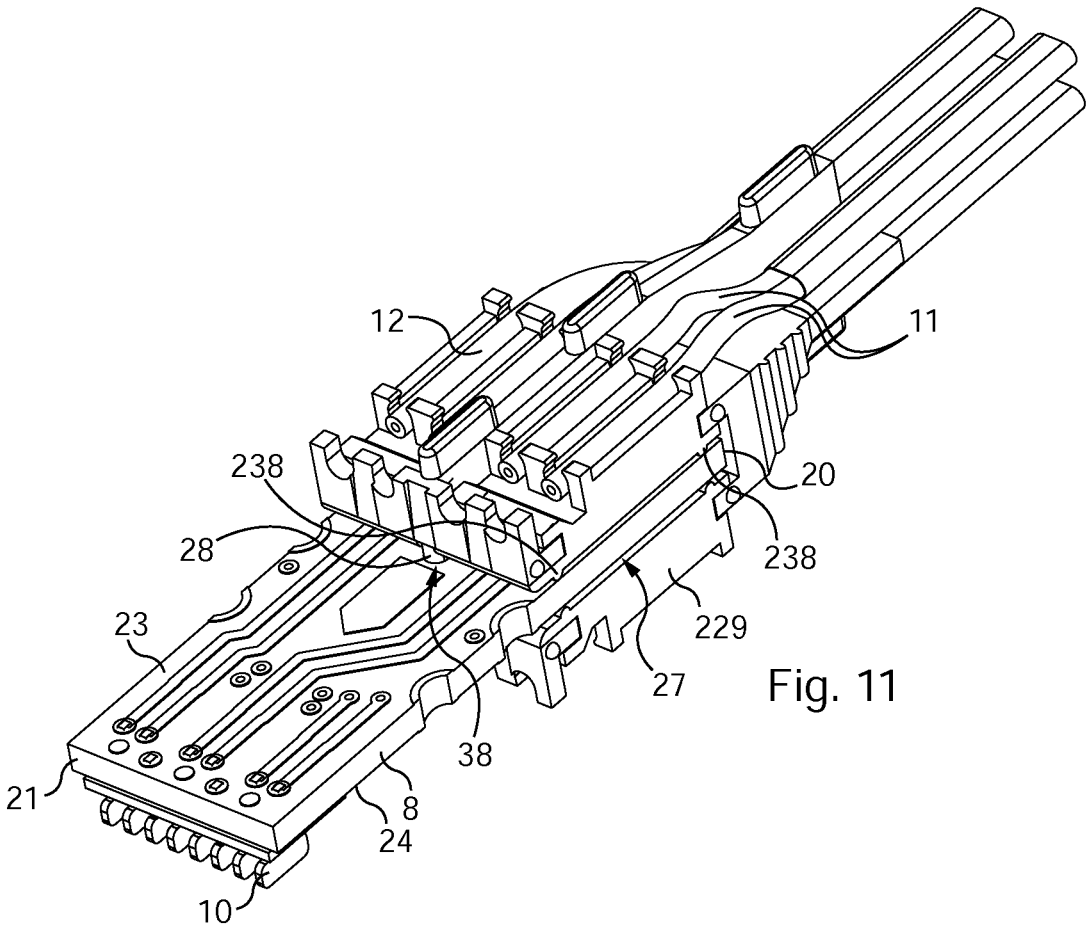
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Fig. 11

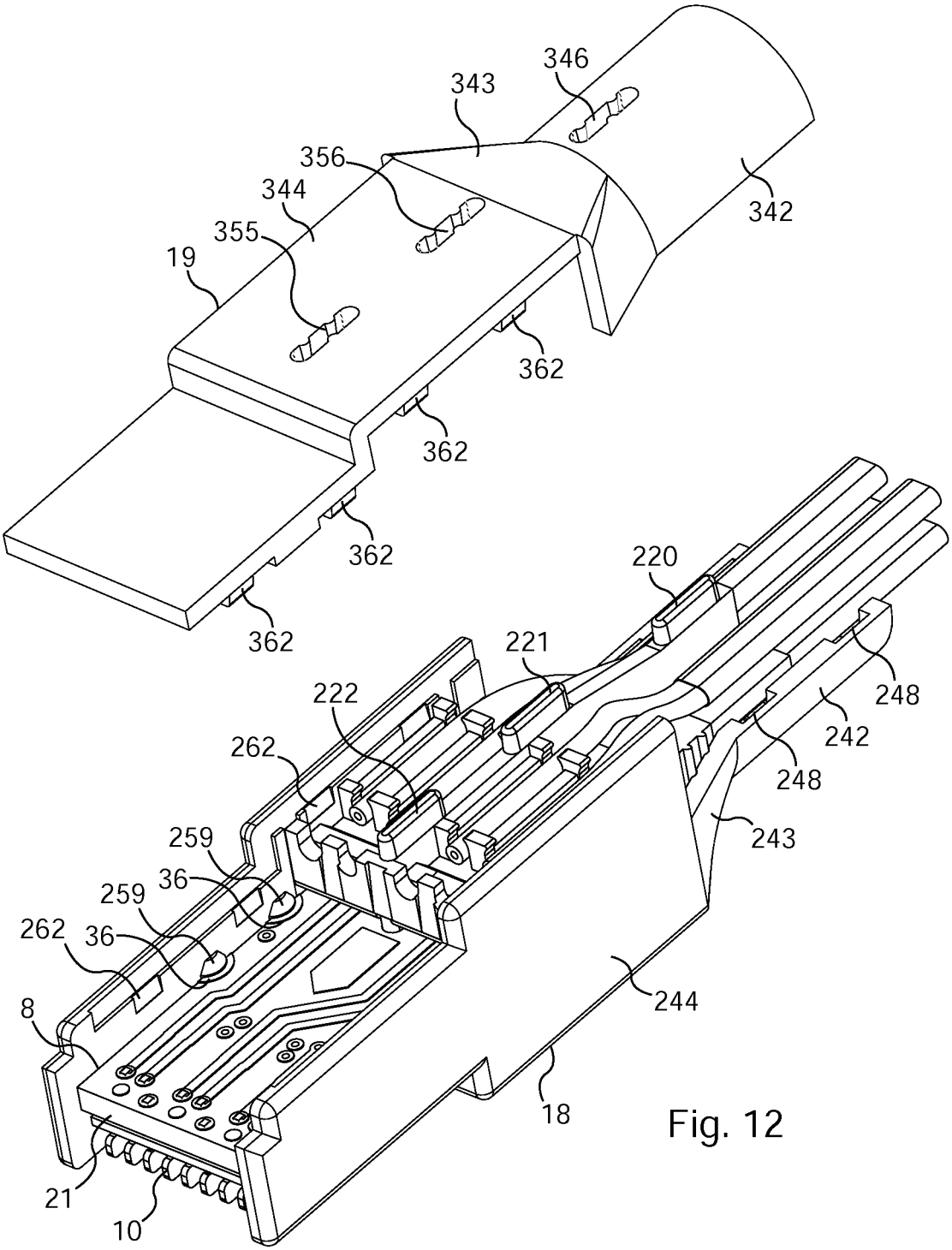
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Fig. 12

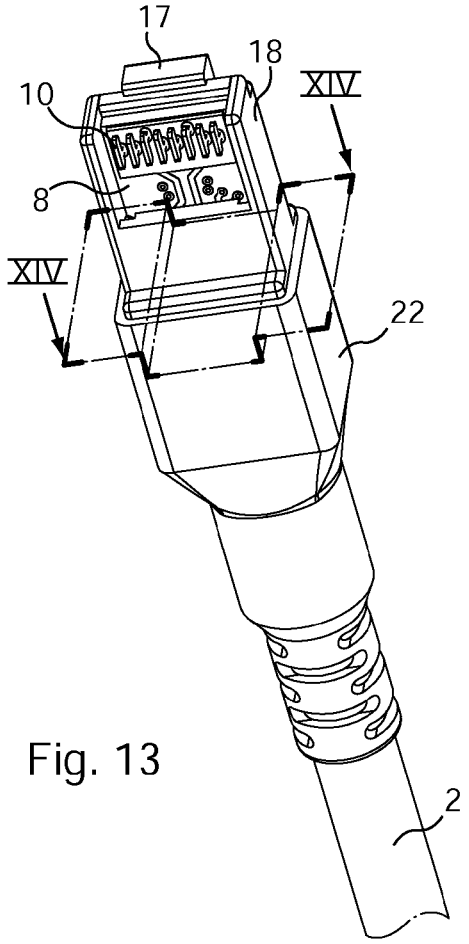
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Fig. 13

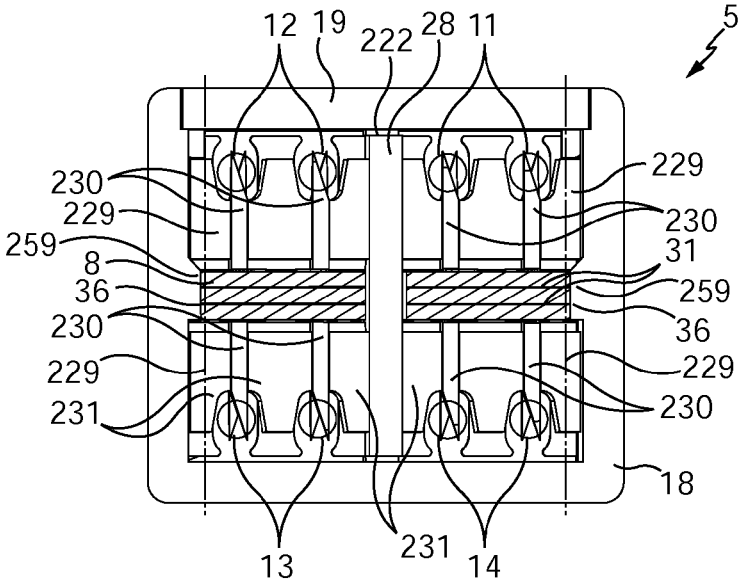
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Fig. 14

MALE RJ45 CONNECTOR FOR RJ45 ELECTRICAL CONNECTION CORD

FIELD OF THE INVENTION

The invention concerns the field of connection technology and more particularly male RJ45 connectors for RJ45 connection cords configured to interconnect items of electronic and/or computer equipment.

TECHNOLOGICAL BACKGROUND

From U.S. Pat. No. 8,298,922 such a male RJ45 connector is known for an RJ45 connection cord, which is provided with a printed circuit board having two opposite faces and electrical conveyance tracks on each of those faces, a separation system configured to separate pairs of conducting wires comprised by the RJ45 connection cord, and a metallic outer shell partially enveloping the printed circuit.

The system for separating the pairs of conducting wires comprises two similar sub-assemblies produced from non-conducting material and which are mounted on respective opposite sides on the faces of the printed circuit.

The RJ45 connector comprises four self-stripping contact devices mounted proud on each of the faces of the printed circuit, as well as a shielding wall also mounted proud on each of the faces of the printed circuit.

Each separation sub-assembly comprises a body in which are provided four insertion cavities configured to receive two pairs of conducting wires, four grooves configured for each to receive an end of a respective self-stripping contact device, as well as an insertion slot configured to accommodate a respective shielding wall.

SUBJECT OF THE INVENTION

The invention is directed to providing a male RJ45 connector of a similar kind, which is particularly simple, convenient and economic with respect to both manufacture and use.

According to a first aspect, the invention also relates to a male RJ45 connector for an RJ45 electrical connection cord provided with a cable having four pairs of conducting wires that are configured to be electrically connected to said male connector, which connector comprises a printed circuit having a first face and a second face which is an opposite face to said first face, as well as a plurality of electrical conveyance tracks to which said pairs of conducting wires are configured to be connected electrically, a spreader system mounted on said printed circuit and configured to separate, electrically insulate and electrically shield said pairs of conducting wires from each other; said male connector being characterized in that:

- said printed circuit comprises at least one grounding plate sandwiched between its first and second faces and a central through-slot extending longitudinally in said printed circuit and opening on a side of said printed circuit, said central through-slot being configured to pass through both said first and second faces and said at least one electrical grounding plate;
- said spreader system comprises a separator body and an extension body projecting from said separator body, said extension body being provided with a hollow configured to receive said printed circuit and an electrically and/or magnetically shielding central wall dividing said hollow into two parts and being configured to be inserted at least mostly into said central through-slot of said printed circuit;

and said electrically and/or magnetically shielding central wall and said at least one grounding plate of said printed circuit are configured to be electrically interconnected and thus form an electrically and/or magnetically shielding barrier between each pair of conducting wires.

The electrically and/or magnetically shielding barrier which is created between each location for the pairs of conducting wires, which wires are themselves configured to be electrically connected to that male connector, advantageously makes it possible to provide the male connector according to the invention with particularly good performance with regard to crosstalk.

To be precise, the level of crosstalk generated between the pairs of conducting wires in the male RJ45 connector according to the invention is here rendered negligible, or almost so, by virtue of the partitioning both of the wire pairs which are juxtaposed in the spreader system, thanks to the electrically and/or magnetically shielding central wall which is inserted into the slot of the printed circuit, and of the wire pairs which are superposed in the spreader system, thanks to said at least one grounding plate of the printed circuit, which is inserted in the hollow of the extension body of the spreader system.

According to preferred features which are simple, convenient and economical, the male connector further comprises a metallic envelope configured to envelope said printed circuit at least partially, and said electrically and/or magnetically shielding central wall, said at least one grounding plate and said metallic envelope are configured to be electrically interconnected and thus substantially form an individual electrically and/or magnetically shielding cage around each pair of conducting wires.

This makes it possible to create an electrically and/or magnetically shielding barrier with still better performance and thus render still more negligible the level of crosstalk generated between the conducting wire pairs in the male RJ45 connector according to the invention.

According to preferred, simple, convenient and economical features of the male RJ45 connector according to the invention:

- said electrically and/or magnetically shielding central wall is provided with an upper end and a lower end which is an opposite end to said upper end, and with at least one projection formed on at least one said upper and/or lower end and configured to be at least partially received in at least one cavity formed in said metallic envelope;
- said male connector further comprises contact blades configured to be fastened to said printed circuit and a contact body configured to be mounted on said contact plates, and said metallic envelope is provided with a recessed portion and/or a proud portion against which is positioned said contact body;
- said male connector further comprises a snap-engaging part configured to immobilize said male connector in a female connector in which said male connector is configured to be mounted, and said metallic envelope is provided with a recessed portion and/or a proud portion against which is positioned said snap-engaging part;
- said metallic envelope is formed in two parts, respectively a connector body configured to receive said printed circuit and said spreader system, as well as a connector cover configured to be mounted on said connector body and to cover said printed circuit and said spreader system;
- said printed circuit is provided with at least one notch formed on at least one side of said printed circuit and said metallic envelope is provided with at least one contact lug configured to cooperate with said at least one

notch so as to establish an electrical connection between said at least one grounding plate and said metallic envelope;

said spreader system further comprises self-stripping contact systems configured to establish an electrical connection between said pairs of conducting wires and said electrical conveyance tracks of said printed circuit, each self-stripping contact system being provided with two self-stripping contact members and with a molded body that is configured to receive at least partially and to electrically insulate from each other said self-stripping contact members, said extension body of said spreader system comprises two positioning parts mounted on said central wall on respective opposite sides of said hollow, and each molded body is fastened both to a respective said positioning part and to said separator body;

at least one said positioning part has an outside face on which is formed at least one bearing surface and said metallic envelope is provided with at least one contact and positioning member which is configured to come to bear on said at least one bearing surface; and/or at least one said positioning part has lateral bosses and said metallic envelope has at least one inside face provided with grooves which are configured to cooperate with said lateral bosses, so as to establish an electrical connection between the spreader and the metallic envelope;

each molded body is provided with a base face turned towards said hollow, with three longitudinal small walls situated apart from each other and extending remotely from said base face, two insertion spaces each provided between two successive small walls and each extending transversely in said molded body until they open onto said base face, and each self-stripping contact member is inserted into a respective said insertion space and projects on respective opposite sides of said space;

each molded body is provided with a base face and with at least one rib formed on said base face and projecting into said hollow formed in said extension body, said at least one rib being configured to guide said printed circuit into said hollow.

said separator body is provided with first attachment lugs extending towards a respective said positioning part, which is provided with at least one second attachment lug extending facing a respective said first attachment lug, and each molded body is provided with two pincer-shaped ends respectively mounted on a said first attachment lug and on a second said attachment lug facing the latter;

said separator body comprises a cross-shaped metallic base having a central wall and two lateral walls disposed on respective opposite sides of the central wall, said central wall having an upper end and a lower end which is an opposite end to said upper end, and at least one projection formed projecting from at least one said upper and/or lower end and configured to be at least partially received in at least one cavity formed in said metallic envelope; and/or

said separator body comprises a cross-shaped metallic base having a central wall and two lateral walls disposed on respective opposite sides of the central wall and each having a portion provided with lateral bosses and said metallic envelope has at least one inside face provided with grooves which are configured to cooperate with said lateral bosses, so as to establish an electrical connection between the spreader and the metallic envelope.

According to a second aspect, the invention also relates to an RJ45 connection cord configured to interconnect items of electronic and/or computer equipment, comprising an electric cable having a first end and a second end which is an opposite end to the first end, an insulating sheath and four pairs of conducting wires enveloped in said sheath; and at least one male RJ45 connector as described above, mounted on at least one said first end and/or second end of said cable.

The connection cord according to the invention is thus particularly simple, convenient and economical in terms of both manufacture and use.

BRIEF DESCRIPTION OF THE DRAWINGS

The disclosure of the invention will now be continued with the description of an example embodiment, given below by way of illustrative and non-limiting example, with reference to the accompanying drawings, in which:

FIG. **1** is a diagrammatic representation in perspective of an RJ45 connection cord in accordance with the invention, provided with a cable and with two male connectors fastened to two opposite ends of the cable;

FIG. **2** is an exploded diagrammatic representation in perspective of a first male connector at a first end of the cable of the cord illustrated in FIG. **1**;

FIGS. **3** and **4** are diagrammatic representations of the two faces of a printed circuit comprised by each of the male connectors of the cord;

FIG. **5** is a cross-section view of the printed circuit on V-V of FIG. **3**;

FIGS. **6** and **7** are diagrammatic representations in perspective of a spreader of the first male connector illustrated in FIG. **2**, from different viewing angles;

FIGS. **8** and **9** are diagrammatic representations in perspective respectively of a connector body and a connector cover, forming a metallic envelope comprised by the first male connector illustrated in FIG. **2**;

FIGS. **10** to **13** are diagrammatic representations in perspective of different steps of assembly of the first male connector illustrated in FIG. **2**; and

FIG. **14** is a cross-section view on XIV-XIV of FIG. **13**.

DETAILED DESCRIPTION OF AN EMBODIMENT

FIG. **1** illustrates an RJ45 connection cord (RJ standing for "Registered Jack"), referenced **1**, configured to interconnect items of electronic and/or computer equipment.

This cord **1** comprises an electric cable **2** having a first end **3** and a second end **4** which is an opposite end to the first end **3**.

This cord **1** further comprises a first male connector **5** mounted on the first end **3** of the cable **2** and a second male connector **6** mounted on the second end **4** of the cable **2**.

The male connectors **5** and **6** are formed here by male jacks and are configured to be inserted into respective female connectors (not illustrated), formed by female sockets.

The cable **2** comprises an insulating sheath **15** and four pairs of twisted conducting wires **11** to **14** enveloped in the sheath **15**, respectively a first pair of wires **11**, a second pair of wires **12**, a third pair of wires **13** and a fourth pair of wires **14** (FIG. **2**).

In the example illustrated and described, the first pair of wires **11** corresponds to the blue pair of conducting wires of the telecommunications cabling standard ANSI/TIA/EIA 568-B, the second pair of wires **12** corresponds to the orange pair of conducting wires of that standard, the third pair of wires **13** corresponds to the green pair of conducting wires of

that standard and the fourth pair of wires **14** corresponds to the brown pair of conducting wires of that standard.

The cable **2** here has electrical and/or magnetic shielding, formed for example by one or more members of metallic mesh (not shown) surrounding the pairs of conducting wires **11** to **14** at least partially.

This electrical and/or magnetic shielding extends for example along the cable **2** between the first and second male connectors **5** and **6** or is at least situated at the location of the first and second ends **3** and **4** of the cable **2**.

The first and second male connectors **5** and **6** comprise the same parts arranged in a similar manner in relation to each other and on the respective ends **3** and **4** of the cable **2**. An overall description is given of only the first male connector **5** mounted on the first end **3** of the cable **2**, illustrated in FIG. **2**.

The first male connector **5** comprises a printed circuit **8** provided with a first face **23** and with a second face **24** which is an opposite face to the first face **23** (FIGS. **3** and **4**), and with a plurality of electrical conveyance tracks **41** to **44** provided on those first and second faces **23** and **24**.

The first male connector **5** comprises a spreader system **9**, hereinafter called spreader, configured to be mounted on a first side **20** of the printed circuit **8**, on both its first and second faces **23** and **24**, to electrically connect the pairs of wires **11** to **14** to the tracks **41** to **44** of the printed circuit **8**.

The spreader **9** here has a separator body **25** and an extension body **26** projecting from the separator body **25**. The extension body **26** has a hollow **27** for receiving the printed circuit **8** and is provided with an electrically and/or magnetically shielding central wall **28** dividing that hollow **27** into two parts.

The separator body **25** is configured here to separate from each other and direct the pairs of conducting wires **11** to **14** apart whereas the extension body **26** is configured here to establish the electrical connections between those conducting wires **11** to **14** and the tracks **41** to **44** of the printed circuit **8**. The extension body **26** here has self-stripping contact systems **229** (FIGS. **6** and **7**) to establish those electrical connections.

The first male connector **5** comprises contact blades **10** configured to be mounted on a second side **21** of the printed circuit **8**, which is an opposite side to its first side **20**, to electrically connect the tracks **41** to **44** of the printed circuit **8** to contact members of a corresponding female connector (which are not illustrated).

The contact blades **10** are configured here to be mounted on one or other of the first and second faces **23** and **24** of the printed circuit **8** (see below for more detail).

The first male connector **5** further comprises a contact body **16** configured to be mounted on the contact blades **10** and to be at least partially inserted into the female connector.

The first male connector **5** comprises a snap-engaging part **17** configured to be mounted on the second side **21** of the printed circuit **8**, away from the contact body **16**, and be at least partially inserted and locked by snap-engagement in the female connector so as to immobilize the first male connector **5** therein.

The contact body **16** is thus mounted on the same face of the printed circuit **8** as the contact blades **10**, whereas the snap-engaging part **17** is here mounted on the other face of the printed circuit **8**.

The first male connector **5** further comprises an envelope, here metallic and formed from a connector body **18** and a connector cover **19** which are configured to be assembled with each other and so envelope at least a major part of the printed circuit **8**, the spreader **9** and the contact blades **10**.

As will be seen below in more detail, the first male connector **5** is configured such that the connector body **18**, the connector cover **19**, the printed circuit **8** and the spreader **9** are connected together electrically.

The connector body **18** here forms a lower half-shell defining an inside space **30** configured to receive the printed circuit **8** and having a base wall (not shown) configured to face the face of the printed circuit **8** on which the contact blades **10** are mounted.

The connector cover **19** here forms an upper half-shell configured to be mounted in particular on the printed circuit **8** and on the spreader **9** and has an upper wall (not shown) configured to face the face of the printed circuit **8** which is an opposite face to that on which the contact blades **10** are mounted.

The first male connector **5** further comprises a sleeve **22**, here substantially tubular; formed from plastics material, and configured to cover the end **3** of the cable **2** as well as partially cover the connector body **18** and the connector cover **19**.

This sleeve **22** comprises a deformable tab **29** configured to come to bear on the end of a deformable lug of the snap-engaging part **17**, to unlock the first male connector **5** from the female connector.

The printed circuit **8** will now be described in more detail with reference to FIGS. **3** to **5**.

The printed circuit **8** is here formed of a multi-layer structure, comprising three layers referred to as substrate layers **32** and four layers referred to as copper layers **31** (of which only two are represented), interposed between the first and second faces **23** and **24** on which are formed the tracks **41** to **44**.

The two copper layers sandwiched between the three substrate layers **32** form electrical grounding plates **31**, also called grounding planes or ground planes.

The printed circuit **8** has a first pair of tracks **41***a-b*, a second pair of tracks **42***a-b*, a third pair of tracks **43***a-b* and a fourth pair of tracks **44***a-b* which pass along the first and second faces **23** and **24**.

The printed circuit **8** has, on its first side **20**, a first pair of input connection terminals **51***a-b* of the circuit **8** and a second pair of input connection terminals **52***a-b* of the circuit **8**, which are provided on the first face **23** of the circuit **8**, as well as a third pair of input connection terminals **53***a-b* of the circuit **8** and a fourth pair of input connection terminals **54***a-b* of the circuit **8**, which are provided on the second face **24** of the circuit **8**.

The printed circuit **8** also has, on its first side **20**, a first copper plane **71** disposed facing the first pair of connection terminals **51***a-b*, a second copper plane **72** disposed facing the second pair of connection terminals **52***a-b*; a third copper plane **73** disposed facing the third pair of connection terminals **53***a-b*; and a fourth copper plane **74** disposed facing the fourth pair of connection terminals **54***a-b;*

Each of the copper planes **71** to **74** is equipped here with two vias each configured to establish an equipotential electrical connection between the grounding planes **31**.

The printed circuit **8** has, on its second side **21**, a first pair of output connection terminals **61***a-b* of the circuit **8**, a second pair of output connection terminals **62***a-b* of the circuit **8**, a third pair of output connection terminals **63***a-b* of the circuit **8** and a fourth pair of output connection terminals **64***a-b* of the circuit **8**.

Each output connection terminal is formed through the circuit **8** and emerges on both the first and second faces **23** and **24** of the circuit **8**.

The input connection terminals **51-54** are aligned pairwise here on the respective faces **23-24** of the circuit **8** whereas the output connection terminals **61-64** are disposed in two rows,

one of the rows having six output connection terminals **61***a-b*, **62***a-b* and **64***a-b* and the other row having the two remaining output connection terminals **63***a-b*.

The first pair of input connection terminals **51***a-b* is here connected directly to the first pair of output connection terminals **61***a-b* via the first pair of tracks **41***a-b*, which tracks each comprise a single portion which passes in continuous manner only over the first face **23** of the circuit **8**.

The second pair of input connection terminals **52***a-b* is here connected directly to the second pair of output connection terminals **62***a-b* via the second pair of tracks **42***a-b*, which tracks each comprise a single portion which passes in continuous manner only over the first face **23** of the circuit **8**.

The third pair of input connection terminals **53***a-b* is here connected directly to the third pair of output connection terminals **63***a-b* via the third pair of tracks **43***a-b*, which tracks each comprise a single portion which passes in continuous manner only over the second face **24** of the circuit **8**.

The fourth pair of input connection terminals **54***a-b* is here indirectly connected to the fourth pair of output connection terminals **64***a-b* via the fourth pair of tracks **44***a-b*, which tracks each comprise a first portion, respectively **45***a* and **45***b*, which passes over the second face **24** of the circuit **8** as well as a second portion, respectively **46***a* and **46***b*, which passes over the first face **23** of the circuit **8**.

The first and second respective portions of the tracks **44***a* and **44***b* are connected by transition portions **47** which cross the electrical grounding plates **31** of the circuit **8** to attain one or other of the faces **23** and **24** of the circuit **8**. These transition portions are formed here by transition vias **47** which are metalized holes and thus electrical conductors.

The printed circuit **8** further comprises a plurality of interconnection vias **35** accommodated at different places in the circuit **8** and which all together cross the first and second faces **23** and **24** and the grounding plates **31** of the circuit **8**. These interconnection vias **35** are here formed by metalized holes and are thus electrical conductors passing by the grounding plates **31**.

The vias **35** are configured to maintain an equipotential connection between the grounding plates **31** of the printed circuit **8**, which makes it possible to avoid creating different surface currents between each grounding plate **31**.

It should be noted that certain vias **35** are furthermore configured to improve the electrical and/or magnetic shielding between the pairs of conveyance tracks. These are for example the two pairs of vias **35** disposed on the second side **21** of the printed circuit **8** and which are respectively interposed between the first pair of tracks **41***a-b* and the second portions **46***a* and **46***b* of the fourth pair of tracks **44***a-b* and between the first pair of tracks **41***a-b* and the second pair of tracks **42***a-b*.

The printed circuit **8** has a third side **33** and a fourth side **34** which is an opposite side to the third side **33**, as well as two notches **36** formed on each of the third and fourth sides **33** and **34**, in the material of the circuit **8**. These notches **36** are configured to enable the establishment of an electrical connection between the grounding plates **31** and the connector body **18**.

The printed circuit **8** further comprises a central through-slot **38** extending longitudinally in the circuit **8** and opening on the first side **20** of the circuit **8**. The slot **38** passes both through the first and second faces **23** and **24** and the grounding plates **31** of the circuit **8** and is configured to receive the central wall **28** of the spreader **9**.

The printed circuit **8** further comprises a connection pad **37** accommodated at the end of the slot **38** and emerging at each of the first and second faces **23** and **24**. The connection pad **37** is equipped with vias (not shown) which are configured to minimize the electrical and/or magnetic coupling between the pairs of conveyance tracks **41** to **44**.

FIGS. **6** and **7** show the spreader **9** in detail from different viewing angles.

The spreader **9** has a longitudinal overall shape extending between a first end **210**, from which extends the separator body **25**, and a second end **211** which is an opposite end to the first end **210**, up to which extends the extension body **26** projecting from the separator body **25**.

It will be noted that the spreader **9** here has two orthogonal axes of symmetry, extending longitudinally along the spreader **9** such that the latter has an upper part and a lower part which is a mirror image of the upper part as well as a first lateral part and a second lateral part which is also a mirror image of the first lateral part.

The separator body **25** here comprises a cross-shaped metallic base having a central wall **212** and two lateral walls **213** disposed on respective opposite sides of the central wall **212**. In FIGS. **6** and **7**, the central wall **212** is vertical whereas the lateral walls **213** are horizontal.

Each lateral wall **213** has a first portion **214** which is planar, a second portion **215** extending from the first portion **214** and which is substantially conical, as well as a third portion **216** extending from the second portion **215**, at the location of its most flared end, and which is planar.

The second conical portion **215** is provided with lateral bosses **217** and the third portion **216** is substantially C-shaped and provided with two first attachment lugs **218** on which are also formed lateral bosses **275**.

The central wall **28** of the extension body **26** is metallic here and extends in line with the central wall **212** of the separator body **25**.

The spreader **9** has an upper edge **219** passing along respective upper ends of the central walls **212** and **28** and three projections **220**, **221** and **222**, referred to as upper projections, which extend projecting from that upper edge **219**.

The spreader **9** furthermore has a lower edge (not shown) passing along respective lower ends of the central walls **212** and **28** and three projections identical to those mentioned above, referred to as lower projections, and of which only one is visible on the drawings, which extend projecting from the lower edge.

The projection **220** is formed on the central wall **212**, the projection **222** is formed on the central wall **28** and the projection **221** is formed astride the central walls **212** and **28**.

The extension body **26** comprises two positioning parts **223** here substantially L-shaped, each mounted on the central wall **28** at the second end **211** of the spreader **9** and on respective opposite sides of the hollow **27** formed in the extension body **26**.

Each positioning part **223** is metallic here and has a first limb **224** of the L in which are formed two notches **225**, as well as a second limb **226** of the L extending from the first limb **224** towards the separator body **25**.

It should be noted that the notches **25** are provided for the initial positioning of the pairs of wires when these latter are mounted on the spreader **9** (see below for more detail). Once the wires are in place, they are cut at the location of their respective free end (see FIGS. **10** and **11**).

The second limb of the L here forms a second attachment lug **226** disposed on respective opposite sides of the central wall **28** of the extension body.

The first limb **224** here furthermore has an outside face **228** on the opposite side to the side from which extends the second limb, on which outside face **228** are formed three bearing surfaces **227**.

Each bearing surface **227** is here formed between two successive notches **225**.

It will be noted that the separator body **25** and the extension body **26** are configured such that each first attachment lug **218** is situated opposite and away from a respective second attachment lug **226**.

Each positioning part **223** is furthermore provided with lateral bosses **276**, similar to the lateral bosses **275** formed on the third portion **216** of each lateral wall **213**, and which are situated at the junction between the first and second limbs of the L.

The extension body **26** further comprises self-stripping contact systems **229** each disposed in the space formed between the first and second respective attachment lugs **218** and **226**.

Each self-stripping contact system **229** comprises two self-stripping contact members **230** which are metallic, and a molded body **231** which is formed of plastic material and in which those two members **230** are accommodated.

Each member **230** comprises a contact base **291** and perforation teeth **232** which project from the contact base **291**.

Each molded body **231** comprises a longitudinal portion **233** which has, at both its ends, two recesses **234** thus forming two substantially C-shaped clips which are respectively mounted on a first attachment lug **218** of the third portion **216** and on a second attachment lug **226** of a positioning part **223**.

Each longitudinal portion **233** has a base face **237** and three longitudinal small walls **235** situated apart from each other and extending remotely from the base face **237**.

Each molded body **231** further comprises two insertion spaces **236** each formed between two successive small walls **235** and each extending transversely in the longitudinal portion **233** until they open in the base face **237**.

A self-stripping contact member **230** is inserted into each of the insertion spaces **236**.

Each insertion space **236** has a cavity-forming part to accommodate the contact base **291** of a respective member **230**, as well as a tunnel-forming part, between two respective small walls **235**, in which project the respective perforation teeth **232**.

The contact base **291** of each member **230** projects from the cavity-forming part of the respective insertion space **236**, in the hollow **27** formed in the extension body **26**.

Each molded body **231** further comprises, at each end of the longitudinal portion **233**, a rib **238** formed on the base face **237** and projecting into the hollow **27** formed in the extension body **26**.

In the spreader **9**, eight members **230** are thus disposed, in pairs, on respective opposite sides of the central wall **28** and on respective opposite sides of the hollow **27** of the extension body **26**, in line with the upper and lower faces of the two lateral portions **213** of the separator body **25**.

FIGS. **8** and **9** show in detail the connector body **18** and the connector cover **19** forming a metallic envelope comprised by the first male connector **5**.

The connector body **18** is generally U-shaped and has a first end **240** and a second end **241** which is an opposite end to the first end **240**.

The connector body **18** comprises a first portion **242** extending from the first end **240** and which is substantially cylindrical, a second portion **243** extending from the first portion **242** and which is substantially frusto-conical, and a third portion **244** extending from the most flared part of the second portion **243** to the second end **241**, and which is U-shaped.

The first cylindrical portion **242** has an inside face **245** on which is recessed a cavity **246** which is configured to receive the projection **220** referred to as upper projection of the spreader **9**; so as to establish an electrical connection between the connector body **18** and the spreader **9**. In this cavity **246** small ribs **280** are formed.

The first cylindrical portion **242** comprises holding members **247** formed projecting from the inside face **245** and which are configured to hold the conducting wires in position on the separator body **25** of the spreader **9**.

The first cylindrical portion **242** furthermore has an edge **249** and assembly notches **248** recessed into that edge **249**.

The second frusto-conical portion **243** has an inside face **250** on which are recessed grooves **251** in the vicinity of an edge **252** and which are configured to cooperate with the bosses **217** of the separator body **25** of the spreader **9**; so as to establish an electrical connection between the connector body **18** and the spreader **9**.

The third U-shaped portion **244** is provided with two lateral walls **253** facing each other and with a base wall **254** connecting the two lateral walls **253**, those walls providing overall definition of the inside space **30** of the connector body **18**.

The third portion **244** has two grooves **277** formed in each lateral wall **253** and configured to receive lateral bosses **275** and **276** respectively formed on the separator body **25** and on the extension body **26**; so as to establish an electrical connection between the connector body **18** and the spreader **9**.

The third portion **244** comprises two cavities **255** and **256** each recessed into the base wall **254**, in the inside space **30**, and which are configured respectively to receive the projections **222** and **223** of the spreader **9**; so as to establish an electrical connection between the connector body **18** and the spreader **9**. In these cavities **255** and **256** small ribs **280** are formed.

The third portion **244** comprises contact and positioning members **257** which extend from the base wall **254** projecting into the inside space **30** and which are configured to come to bear on the respective bearing surfaces **227** of a respective positioning part **223**; so as to establish an electrical connection between the connector body **18** and the spreader **9**.

The contact and positioning members **257** are formed astride a shoulder **258** comprised by the base wall **254**.

The third portion **244** comprises contact lugs **259**, each formed both on the base wall **254** and on the lateral walls **253**, projecting into the inside space **30**.

These contact lugs **259** are configured to cooperate with the notches **36** of the printed circuit **8** so as to establish an electrical connection between the grounding plates **31** of that circuit **8** and the connector body **18**.

Two contact lugs **259** are disposed astride the shoulder **258** and two other contact lugs **259** are disposed between that shoulder **258** and the second end **241** of the connector body **18**.

The third portion **244** comprises, on its base wall **254**, a recessed portion **260** formed between the shoulder **258** and the second end **241** of the connector body **18**, as well as a proud portion **261** formed between the recessed portion **260** and that second end **241**.

The lateral walls **253** of the third portion **244** each have an edge **263** and assembly notches **262** recessed into the respective edges **263**.

The assembly notches **248** and **262** here form assembly members of the connector body **18**.

The connector cover **19** is configured to be assembled with the connector body **18** and has a relatively similar shape thereto.

The connector cover **19** has a first end **340** and a second end **341** which is an opposite end to the first end **340**.

The connector cover **19** comprises a first portion **342** extending from the first end **340** and which is substantially cylindrical, a second portion **343** extending from the first portion **342** and which is substantially frusto-conical, and a third portion **344** extending from the most flared part of the second portion **343** to the second end **341**, and which is substantially planar.

The first cylindrical portion **342** has an inside face **345** on which is recessed a cavity **346** which is configured to receive a projection **220** referred to as lower projection of the spreader **9**; so as to establish an electrical connection between the connector cover **19** and the spreader **9**. In this cavity **346** small ribs **380** are formed.

The first cylindrical portion **342** comprises holding members **347** formed projecting from the inside face **345** and which are configured to hold the conducting wires in position on the separator body **25** of the spreader **9**.

The first cylindrical portion **342** furthermore has an edge **349** and assembly lugs **348** formed projecting from that edge **349**, and which are configured to be received in the assembly notches **248** of the connector body **18**; so as to establish an electrical connection between the connector cover **19** and the connector body **18**.

The second frusto-conical portion **343** has an inside face **350** on which are recessed grooves **351** in the vicinity of an edge **352**, which grooves are configured to cooperate with the bosses **217** of the separator body **25** of the spreader **9**; so as to establish an electrical connection between the connector cover **19** and the spreader **9**.

The third planar portion **344** has an inside face **370** in which are recessed two cavities **355** and **356** which are configured respectively to receive projections referred to as lower projections of the spreader **9**; so as to establish an electrical connection between the connector cover **19** and the spreader **9**. In these cavities **355** and **356** small ribs **380** are formed.

The third planar portion **344** comprises contact and positioning members **357** which extend projecting from the inside face **370** and which are configured to come to bear on the respective bearing surfaces **227** of a respective positioning part **223**; so as to establish an electrical connection between the connector cover **19** and the spreader **9**.

The contact and positioning members **357** are formed astride a shoulder **358** comprised by the third planar portion **344**.

The third planar portion **344** comprises assembly lugs **362** on its sides which project from the inside face **370**, and which are configured to be received in the assembly notches **262** of the connector body **18**; so as to establish an electrical connection between the connector body **18** and the connector cover **19**.

The assembly lugs **348** and **362** here form assembly members complementary to the connector cover **19**.

The third planar portion **344** further comprises a recessed portion **360** formed between the shoulder **358** and the second end **341** of the connector cover **19**, as well as a proud portion **361** formed between the recessed portion **360** and that second end **341**.

The method of assembling the male connector **5** will now be described with reference to FIGS. **10** to **13**. Of course a similar method applies to the male connector **6**.

The pairs of wires **11** to **14** at the end **3** of the cable **2** are fastened to the spreader **9** to form a first connection sub-assembly (FIG. **10**). The spreader **9** is placed in direct contact against the sheath **15** of the cable **2**.

The pairs of wires **11** to **14** are separated from each other, without crossing, by the separator body **25**, and more specifically by the central wall **212** and the lateral walls **213**, then brought towards a respective molded body **231** of the extension body **26**.

Each wire of the pairs of wires **11** to **14** is inserted into the tunnel part of a respective insertion space **236** of a respective self-stripping contact system **229** as far as the notches **225**.

Each conducting wire is thus placed in contact with a respective member **230** by perforation of the insulating sheath enveloping that wire by the respective teeth **232**, then each wire is cut to length, between the respective notch **225** and the exit of the respective tunnel part.

A second sub-assembly formed by the printed circuit **8** and by the contact blades **10** that are fastened thereon is mounted here on the first connection sub-assembly to form a first connection assembly (FIG. **11**).

More specifically, this second sub-assembly is partially inserted into the hollow **27** of the spreader **9**, by the first side **20** of the circuit **8** where the slot **38** is formed.

The central wall **28** of the extension body **26** is thus inserted into the slot **38** until it abuts with the bottom of the slot **38**.

The central wall **28** and the slot **38** are configured such that the sides of the central wall **28** are guided by the wall delimiting the slot **38**.

The extension body **26** and the circuit **8** are configured such that the latter has its first and second faces **23** and **24** partially facing the respective inside faces of the respective self-stripping contact systems **229**.

The first and second faces **23** and **24** of the circuit **8** furthermore come to bear against the ribs **238** of the respective molded bodies **231** and the circuit **8** is guided by these latter.

The input connection terminals **51** to **54** of the circuit **8** are in mechanical and electrical contact with the portions of the respective contact bases **291** which project into the hollow **27**, thereby electrically connecting those input terminals **51** to **54** to the pairs of wires **11** to **14**.

The first connection assembly is then partially inserted into the inside space **30** of the connector body **18**, from top to bottom, that is to say starting from the edge **263** of the lateral walls **253** in the direction of the base wall **254** of the third portion **244** of that connector body **18**.

The lower projections (not shown) of the spreader **9** which project from the lower ends of its central walls **212** and **28** are partially received in the cavities **246**, **255** and **256** of the connector body **18**; so as to establish an electrical contact between the spreader **9** and the connector body **18**.

The first connection assembly is positioned and held in the connector body **18** by the cooperation of the lower projections with the ribs **280** formed in those cavities **246**, **255** and **256** and with the holding members **347** of the connector body **18**.

The notches **36** formed on each of the third and fourth sides **33** and **34** of the circuit **8** are mounted on the contact lugs **259** of the connector body **18**; so as to establish an electrical contact between the circuit **8** and the connector body **18**.

The grooves **251** of the second frusto-conical portion **243** cooperate with the lateral bosses **217** of the separator body **25** of the spreader **9**; so as to establish an electrical contact between the spreader **9** and the connector body **18**.

The grooves **277** of the third portion **244** cooperate with the lateral bosses **275** and **276** of the separator body **25** and of the extension body **26** of the spreader **9**; so as to establish an electrical contact between the spreader **9** and the connector body **18**.

The contact and positioning members **257** of the third portion **244** come to bear on the respective bearing surfaces **227** of the positioning parts **223**; so as to establish an electrical contact between the spreader **9** and the connector body **18**.

It will be noted that the contact body **16** is normally mounted on the contacts plates **10** and partially on the circuit **8** before these are inserted into the connector body **18**.

The contact body **16** is configured to come to rest on the recessed portion **260** and on the proud portion **261** comprised by the third portion **244** of the connector body **18**.

Thus, the first portion **242** of the connector body **18** partially receives a first part of the central wall **212** and the respective first portions **214** of the lateral walls **213** of the separator body **25**.

The second portion **243** of the connector body **18** partially receives a second part of the central wall **212** and the respective second portions **215** of those lateral walls **213**.

The third portion **244** of the connector body **18** fully receives the spreader **9** and the second connection sub-assembly formed by the printed circuit **8** and the contact blades **10**, as well as partially the contact body **16**.

The third portion **244** is configured for the contact blades **10** to be accessible (FIG. **13**).

The connector cover **19** is mounted on the connector body **18**, the assembly lugs **348** and **362** of the connector cover **19** being received in the assembly notches **248** and **262** of the connector body **18**; so as to establish an electrical contact between the connector cover **19** and the connector body **18**. The upper projections **220**, **221** and **222** of the spreader **9** which project from the upper ends of its central walls **212** and **28** are partially received in the respective cavities **346**, **356** and **355** of the connector cover **19**; so as to establish an electrical contact between the spreader **9** and the connector cover **19**.

The grooves **351** of the second frusto-conical portion **343** cooperate with the bosses **217** of the separator body **25** of the spreader **9**; so as to establish an electrical contact between the spreader **9** and the connector cover **19**.

The contact and positioning members **357** of the third portion **344** come to bear on the respective bearing surfaces **227** of the positioning parts **223**; so as to establish an electrical contact between the spreader **9** and the connector cover **19**.

It will be noted that the snap-engaging part **17** is normally mounted on the circuit **8** before the assembly of the connector cover **19** on the connector body **18**.

The snap-engaging part **17** is configured in order for the recessed portion **360** and the proud portion **361** comprised by the third portion **344** of the connector cover **19** to come to rest on that snap-engaging part **17**.

The deformable lug of the snap-engaging part **17** is configured to remain outside the metallic envelope formed by the connector body **18** and the connector cover **19**.

Thus, the first portion **342** of the connector cover **19** partially covers the first part of the central wall **212** and the respective first portions **214** of the lateral walls **213** of the separator body **25**.

The second portion **343** of the connector cover **19** partially covers the second part of the central wall **212** and the respective second portions **215** of those lateral walls **213**.

The third portion **344** of the connector cover **19** fully covers the spreader **9** and the second connection sub-assembly formed by the printed circuit **8** and the contact blades **10**, as well as partially the snap-engaging part **17**.

The sleeve **22** is next mounted on the cable **2** and comes to cover the major part of the metallic envelope, the deformable tab **29** of the sleeve **22** coming to bear on the deformable tab of the snap-engaging part **17**.

The sleeve **22** envelopes the connector body **18** and the connector cover **19** starting from their respective first end **240**, **340** as far as their respective shoulder **258**, **358** formed in their respective third portion **244**, **344**; which generally corresponds to the location of the second end **211** of the spreader **9** in the metallic envelope.

FIG. **14** diagrammatically illustrates a cross section of the assembled male connector **5**.

The grounding plates **31** of the circuit **8** are electrically connected to the connector body **18** via notches **36** and contact lugs **259**.

The spreader **9** is electrically connected to the connector body and cover **18** and **19** via the cavities **246**, **255**, **256**, **346**, **355** and **356** and via the upper and lower projections, via the lateral bosses **217**, **275** and **276** and the grooves **251**, **351** and **277**, and via the bearing surfaces **227** and the contact and positioning members **257** and **357**.

The connector body and cover **18** and **19** are electrically connected together via their respective edges **249**, **252**, **263**, **342** and **352** and also by the assembly lugs **348** and **362** and the assembly notches **248** and **262**.

Thus, the connector body **18**, the connector cover **19**, the grounding plates **31** of the circuit **8** and the shielding central wall **28** are electrically connected together at the same time to a reference potential, and are configured to form individual electrically and/or magnetically shielding cages, also called "Faraday cages", formed around each pair of wires **11** to **14**; while each conducting wire is electrically insulated from the others (including that of the same pair) by virtue of the respective molded body **231** of the respective self-stripping contact system **229** in which each conducting wire is received.

In variants that are not illustrated:

- the printed circuit does not have three substrate layers and four copper layers but for example two substrate layers and three copper layers, of which only one forms an grounding plane sandwiched between the two substrate layers;
- the printed circuit has conveyance tracks that are distinct from those illustrated in the drawings and for example has several or even all the conveyance tracks discontinuous or continuous on both faces of the circuit;
- the printed circuit has a greater number or fewer connection vias and/or they are formed with a different arrangement to that illustrated in FIGS. **3** and **4**;
- the printed circuit has a longer or shorter slot provided that a major part of the central wall of the extension body of the spreader can be inserted therein;
- the grounding plate or plates are also electrically connected to the central wall of the extension body of the spreader via contacts points in the slot of the circuit, or even via the contact lug formed in the circuit at the end of the slot;
- the printed circuit has a greater number or fewer notches on its third and fourth sides; and/or
- the snap-engaging part is mounted on the printed circuit before insertion thereof into the connector body.

It should be noted more generally that the invention is not limited to the examples described and represented.

The invention claimed is:

1. A male RJ45 connector for an RJ45 electrical connection cord provided with a cable (**2**) having four pairs of conducting wires (**11**-**14**) that are configured to be electrically connected to said male connector (**5**, **6**), which connector comprises a printed circuit (**8**) having a first face (**23**) and a second face (**24**) which is an opposite face to said first face (**23**), as well as a plurality of electrical conveyance tracks (**41**-**46**) to which said pairs of conducting wires (**11**-**14**) are configured to be connected electrically, a spreader system (**9**) mounted on said printed circuit (**8**) and configured to separate, electrically

insulate and electrically shield said pairs of conducting wires (**11-14**) from each other; said male connector (**5**, **6**) being characterized in that:

said printed circuit (**8**) comprises at least one grounding plate (**31**) sandwiched between its first and second faces (**23**, **24**) and a central through-slot (**38**) extending longitudinally in said printed circuit (**8**) and opening on a side (**20**) of said printed circuit (**8**), said central through-slot (**38**) being configured to pass through both said first and second faces (**23**, **24**) and said at least one electrical grounding plate (**31**);

said spreader system (**9**) comprises a separator body (**25**) and an extension body (**26**) projecting from said separator body (**25**), said extension body (**26**) being provided with a hollow (**27**) configured to receive said printed circuit (**8**) and an electrically and/or magnetically shielding central wall (**28**) dividing said hollow (**27**) into two parts and being configured to be inserted at least mostly into said central through-slot (**38**) of said printed circuit (**8**);

and said electrically and/or magnetically shielding central wall (**28**) and said at least one grounding plate (**31**) of said printed circuit (**8**) are configured to be electrically interconnected and thus form an electrically and/or magnetically shielding barrier between each pair of conducting wires (**11-14**).

2. A male RJ45 connector according to claim **1**, characterized in that it further comprises a metallic envelope configured to envelope said printed circuit (**8**), at least partially, and said electrically and/or magnetically shielding central wall (**28**), said at least one grounding plate (**31**) and said metallic envelope are configured to be electrically interconnected and thus substantially form an individual electrically and/or magnetically shielding cage around each pair of conducting wires (**11-14**).

3. A male RJ45 connector according to claim **2**, characterized in that said electrically and/or magnetically shielding central wall (**28**) is provided with an upper end and a lower end which is an opposite end to said upper end, and at least one projection (**221**, **222**) provided projecting from at least one said upper and/or lower end and configured to be at least partially received in at least one cavity (**255**, **256**, **355**, **356**) formed in said metallic envelope.

4. A male RJ45 connector according to claim **2**, characterized in that said male connector further comprises contact blades (**10**) configured to be fastened to said printed circuit (**8**) and a contact body (**16**) configured to be mounted on said contact plates (**10**), and said metallic envelope is provided with a recessed portion (**360**) and/or a proud portion (**361**) against which is positioned said contact body (**16**).

5. A male RJ45 connector according to claim **2**, characterized in that it further comprises a snap-engaging part (**17**) configured to immobilize said male connector (**5**, **6**) in a female connector in which said male connector (**5**, **6**) is configured to be mounted, and said metallic envelope is provided with a recessed portion (**260**) and/or a proud portion (**261**) against which is positioned said snap-engaging part (**17**).

6. A male RJ45 connector according to claim **2**, characterized in that said metallic envelope is formed in two parts, respectively a connector body (**18**) configured to receive said printed circuit (**8**) and said spreader system (**9**), as well as a connector cover (**19**) configured to be mounted on said connector body (**18**) and to cover said printed circuit (**8**) and said spreader system (**9**).

7. A male RJ45 connector according to claim **2**, characterized in that said printed circuit (**8**) is provided with at least one notch (**36**) formed on at least one side (**33**, **34**) of said printed circuit (**8**) and said metallic envelope is provided with at least one contact lug (**259**) configured to cooperate with said at least one notch (**36**) so as to establish an electrical connection between said at least one grounding plate (**31**) and said metallic envelope.

8. A male RJ45 connector according to claim **2**, characterized in that said spreader system (**9**) further comprises self-stripping contact systems (**229**) configured to establish an electrical connection between said pairs of conducting wires (**11-14**) and said electrical conveyance tracks (**41-46**) of said printed circuit (**8**), each self-stripping contact system (**229**) being provided with two self-stripping contact members (**230**) and with a molded body (**231**) that is configured to receive at least partially and to electrically insulate from each other said self-stripping contact members (**230**), said extension body (**26**) of said spreader system (**9**) comprises two positioning parts (**223**) mounted on said central wall (**28**) on respective opposite sides of said hollow (**27**), and each molded body (**231**) is fastened both to a respective said positioning part (**223**) and to said separator body (**25**).

9. A male RJ45 connector according to claim **8**, characterized in that at least one said positioning part (**223**) has an outside face (**228**) on which is formed at least one bearing surface (**227**) and said metallic envelope is provided with at least one contact and positioning member (**257**, **357**) which is configured to come to bear on said at least one bearing surface (**227**); and/or at least one said positioning part (**223**) has lateral bosses (**276**) and said metallic envelope has at least one inside face (**250**) provided with grooves (**277**) which are configured to cooperate with said lateral bosses (**276**).

10. A male RJ45 connector according to claim **8**, characterized in that each molded body is (**231**) provided with a base face (**237**) turned towards said hollow (**27**), with three longitudinal small walls (**235**) situated apart from each other and extending remotely from said base face (**237**), two insertion spaces (**236**) each provided between two successive small walls (**235**) and each extending transversely in said molded body (**231**) until they open onto said base face (**237**), and each self-stripping contact member (**230**) is inserted into a respective said insertion space (**236**) and projects on respective opposite sides of said space.

11. A male RJ45 connector according to claim **8**, characterized in that each molded body (**231**) is provided with a base face (**237**) and with at least one rib (**238**) formed on said base face (**237**) and projecting into said hollow (**27**) formed in said extension body (**26**), said at least one rib (**238**) being configured to guide said printed circuit (**8**) into said hollow (**27**).

12. A male RJ45 connector according to claim **8**, characterized in that said separator body (**25**) is provided with first attachment lugs (**218**) extending towards a respective said positioning part (**223**) which is provided with at least one second attachment lug (**226**) extending facing a respective said first attachment lug (**218**), and each molded body (**231**) is provided with two pincer-shaped ends respectively mounted on a said first attachment lug (**218**) and on a second said attachment lug (**226**) facing the latter.

13. A male RJ45 connector according to claim **2**, characterized in that said separator body (**25**) comprises a cross-shaped metallic base having a central wall (**212**) and two lateral walls (**213**) disposed on respective opposite sides of the central wall (**212**), said central wall (**212**) having an upper end and a lower end which is an opposite end to said upper end, and at least one projection (**220**) formed projecting from at least one said upper and/or lower end and configured to be at least partially received in at least one cavity (**246**, **255**, **346**, **355**) formed in said metallic envelope.

14. A male RJ45 connector according to claim 2, characterized in that said separator body (25) comprises a cross-shaped metallic base having a central wall (212) and two lateral walls (213) disposed on respective opposite sides of the central wall (212) and each having a portion (215) provided with lateral bosses (217, 275), and said metal envelope has at least one inside face (250, 350) provided with grooves (251, 277, 351) which are configured to cooperate with said lateral bosses (217, 275).

15. An RJ45 connection cord configured to interconnect items of electronic and/or computer equipment, comprising an electric cable (2) having a first end (3) and a second end (4) which is an opposite end to the first end (3), an insulating sheath (15) and four pairs of conducting wires (11-14) enveloped in said sheath (15); and at least one male RJ45 connector (5, 6) according to claim 1, mounted on at least one said first end (3) and/or second end (4) of said cable (2).

16. A male RJ45 connector according to claim 3, characterized in that said male connector further comprises contact blades (10) configured to be fastened to said printed circuit (8) and a contact body (16) configured to be mounted on said contact plates (10), and said metallic envelope is provided with a recessed portion (360) and/or a proud portion (361) against which is positioned said contact body (16).

17. A male RJ45 connector according to claim 3, characterized in that it further comprises a snap-engaging part (17) configured to immobilize said male connector (5, 6) in a female connector in which said male connector (5, 6) is configured to be mounted, and said metallic envelope is provided with a recessed portion (260) and/or a proud portion (261) against which is positioned said snap-engaging part (17).

18. A male RJ45 connector according to claim 9 characterized in that each molded body is (231) provided with a base face (237) turned towards said hollow (27), with three longitudinal small walls (235) situated apart from each other and extending remotely from said base face (237), two insertion spaces (236) each provided between two successive small walls (235) and each extending transversely in said molded body (231) until they open onto said base face (237), and each self-stripping contact member (230) is inserted into a respective said insertion space (236) and projects on respective opposite sides of said space.

19. A male RJ45 connector according to claim 9, characterized in that each molded body (231) is provided with a base face (237) and with at least one rib (238) formed on said base face (237) and projecting into said hollow (27) formed in said extension body (26), said at least one rib (238) being configured to guide said printed circuit (8) into said hollow (27).

20. A male RJ45 connector according to claim 9, characterized in that said separator body (25) is provided with first attachment lugs (218) extending towards a respective said positioning part (223) which is provided with at least one second attachment lug (226) extending facing a respective said first attachment lug (218), and each molded body (231) is provided with two pincer-shaped ends respectively mounted on a said first attachment lug (218) and on a second said attachment lug (226) facing the latter.

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